**Homework 86 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Find Surface Area in Multiple Contexts Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pr: \_\_\_\_\_\_**

**Failure to show work or write in complete sentences will result in a LaSalle.**

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| 1) The length of one side of a cube is 7 ft.   1. Draw a diagram of this cube. 2. Find the area of one face of the cube. 3. Find the full surface area of the cube. 4. Find the volume of the cube. | 2) The length of one side of a cube is 2 mm.   1. Draw a diagram of this cube. 2. Find the area of one face of the cube. 3. Find the full surface area of the cube. 4. Find the volume of the cube. |
| 3) The volume of the cube is 1,000 cubic centimeters. What is the area of one face of the cube? | 4) The area of the face of a cube is 81 square inches. What is the volume of that cube? |
| 5) Dee is going to cover her front porch with bricks and she plans to put the bricks next to each other so there is no space in between them. The bricks are rectangular prisms that measure 1 inches long by 3 inches wide by 6 inches tall. If Dee’s porch is a rectangle that measures 11 feet by 8 feet, what is the minimum number of bricks that she will need to fully cover her porch?  Step 1: Find MAX surface area of the bricks  Step 2: Find area of the backyard (convert units if needed)  Step 3: Find # of bricks | 6) A teacher wants to cover his bulletin board with student work. The board is 2 feet wide and 8 feet tall. Without overlapping, how many student papers can he staple onto the board if they are each 8.5 x 11 inches?  Step 1: Find MAX surface area of the papers  Step 2: Find area of the board (convert units if needed)  Step 3: Find # of papers (note: without overlapping) |
| 7) Jessica is going to cover her patio with bricks and she plans to put the bricks next to each other so there is no space in between them. The bricks are rectangular prisms that measure 4 inch tall by 2 inches wide by 8 inches long. If Jessica’s patio is a rectangle that measures 8 feet by 11 feet, what is the minimum number of bricks that she will need to fully cover her porch? | 8) Dee is going to cover her front porch with bricks and she plans to put the bricks next to each other so there is no space in between them. The bricks are rectangular prisms that measure 2 inches long by 4 inches wide by 8 inches tall. If Dee’s porch is a rectangle that measures 10 feet by 6 feet, what is the minimum number of bricks that she will need to fully cover her porch? |
| 9) A teacher wants to cover his bulletin board with student work. The board is 8 feet wide and 10 feet tall. Without overlapping, how many student papers can he staple onto the board if they are each 8.5 x 11 inches? | 10) A balcony is 5 feet by 6 feet. What is the area of the balcony in inches? |
| 11) The area of one face of a cube is 81 in2. Find the volume of the cube. | 12) The area of one face of a cube is 64 cm2. Find the volume of the cube. |